

1 ALL-DEVICE-SPACE
2 AUTOMATIC BLACK REPLACEMENT
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5 ABSTRACT OF THE DISCLOSURE
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7 A direct device-space-to-device-space transform ad-
8 justs the amount of actual black ink, to avoid highlight
9 and midtone granularity in incremental printing — but
10 with no need for translation into perceptual space. If
11 the amount of black ink specified in the input data for a
12 particular color is very small or very large, then that
13 specified color is passed through the transform without
14 substantial change. Thereby the amount of actual black
15 ink and other colorants is held as nearly as practical at
16 levels dictated by device-space input specifications while
17 minimizing visible granularity. Replacement behavior is
18 chosen to smoothly blend between different kinds of opera-
19 tion in different tonal ranges. This system accommodates
20 personnel trained in classical printing-press technolo-
21 gies, who are accustomed to full control over amounts of
22 black and other colorants.